SPECIAL CONSTRUCTION

proposed methods of construction are in accordance with all applicable provisions of Section 3107.5.

SECTION 3108.0 RADIO AND TELEVISION TOWERS

- 3108.1 General: Subject to the structural provisions of Section 1609.0 for wind loads and the requirements of Section 1510.0 governing the fireresistance ratings of buildings for the support of roof structures, all radio and television towers shall be designed and constructed as herein provided.
- 3108.2 Location and access: Towers shall be located and equipped with step bolts and ladders so as to provide ready access for inspection purposes. Guy wires or other accessories shall not cross or encroach upon any street or other public space, or over any electric power lines, or encroach upon any other privately owned property without written consent of the owner.
- 3108.3 Construction: All towers shall be constructed of approved corrosion-resistant noncombustible material. The minimum type of construction of isolated radio towers not more than 100 feet (30480 mm) in height shall be Type 4.
- 3108.4 Loads: Towers shall be designed to resist wind loads in accordance with EIA/TIA 222-E listed in Chapter 35. Consideration shall be given to conditions involving wind load on ice-covered sections in localities subject to sustained freezing temperatures.
 - 3108.4.1 Dead load: Towers shall be designed for the dead load plus the ice load in regions where ice formation occurs.
 - 3108.4.2 Uplift: Adequate foundations and anchorage shall be provided to resist two times the calculated wind uplift.
- 3108.5 Grounding: All towers shall be permanently and effectively grounded.

SECTION 3109.0 RADIO AND TELEVISION ANTENNAS

- 3109.1 Permits not required: A building permit is not required for roof installation of antennal structures not more than 12 feet (3658 mm) in height for private radio or television reception. Such a structure shall not be erected so as to injure the roof covering, and when removed from the roof, the roof covering shall be repaired to maintain weather and water tightness. The installation of any antennal structure mounted on the roof of a building shall not be erected nearer to the lor line than the total height of the antennal structure above the roof, nor shall such structure be erected near electric power lines or encroach upon any street or other public space.
- 3109.2 Permits required: Approval shall be secured for all roof-mounted antennal structures more than 12 feet (3658 mm) in height above the roof. The application shall be accompanied by detailed drawings of the structure and methods of anchorage. All connections to the roof structure shall be properly flashed to maintain water tightness. The design and materials of construction shall comply with the requirements of Section 3108.3 for character, quality and minimum dimension.
- 3109.3 Dish antennas: An antenna consisting of a radiation element which transmits or receives radiation signals generated as electrical, light or sound energy, and supported by a structure with or without a reflective component to the radiating dish, usually in a circular shape with a parabolic curve design con-

structed of a solid or open mesh surface, shall be known as a dish

- 3109.3.1 Permits: The approval of the code official shall be secured for all dish antennal structures more than 2 feet (610 mm) in diameter erected on the roof of or attached to any building or structure. A permit is not required for dish antennas not more than 2 feet (610 mm) in diameter erected and maintained on the roof of any building.
- 3109.3.2 Structural provisions: Dish antennas larger than 2 feet (610 mm) in diameter shall be subject to the structural provisions of Sections 1608.0, 1609.0 and 3108.4. The snow load provisions of Section 1608.0 shall not apply where the antenna has a heater to melt falling snow.

SECTION 3110.0 WINDOW-CLEANING SAFEGUARDS

3110.1 General: All buildings and structures over 50 feet (15240 mm) or four stories in *height*, in which the windows are cleaned from the outside, shall be provided with anchors, helt terminals or other approved safety devices for all window openings. Such devices shall be of an approved design, and shall be constructed of corrosion-resistant materials securely attached to the window frames or anchored in the enclosure walls of the building. Castiron or cast-bronze anchors shall be prohibited.

THE BOCA NATIONAL BUILDING CODE/1996

1608.7.4 Intersecting drifts: Where one snow drift intersects another at an angle as depicted in Figure 1608.7.4, the maximum unit pressure of the drift shall be taken as the greater of the two individual drifts, but not the sum of the two.

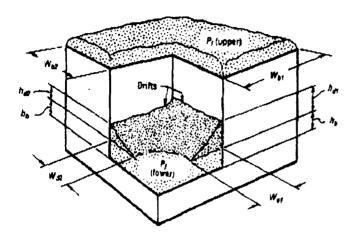


Figure 1608.7.4
INTERSECTING SNOW DRIFTS

1608.8 Sliding snow: Lowerroofs which are located below roofs having a slope greater than 20 degrees (0.35 rad) shall be designed for an increase in drift height of 0.4 h_a , provided that the total drift surcharge $(h_a + 0.4 h_d)$ shall not exceed the height of the roof above the uniform snow depth $(h_r \cdot h_b)$ (see Figure 1608.8 for depiction of h_d and h_d). Sliding snow shall not be considered where the lower roof is horizontally separated from the higher roof by a distance (S) greater than the difference in height between the upper and lower roofs (h_d) or 20 feet (6096 mm) (see Figure 1608.8).

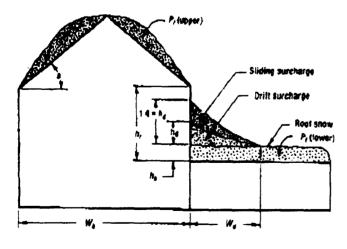


Figure 1688.8
ADDITIONAL SURCHARGE DUE TO SLIDING SNOW

SECTION 1609.6 WIND LOADS

>1609.1 General: All buildings, other exposed structures components, cladding and roof coverings shall be designed to resist

the pressures caused by wind in any direction as provided for herein, or shall comply with Section 6 of ASCE 7 listed in Chapter 35. Where the provisions of ASCE 7 listed in Chapter 35 are utilized, the provisions of Section 1609.1.4 shall apply. The basic wind speed shall be determined in accordance with Section 1609.3. The exposure category shall be determined in accordance with Section 1609.4. The importance factor and the minimum design wind load shall be determined in accordance with Sections 1609.5 and 1609.6. Wind loads on the building's main windforce-resisting system shall be determined in accordance with Section 1609.7. Building component and cladding wind loads shall be determined in accordance with Section 1609.8. Wind loads on structures other than buildings shall be determined in accordance with Section 1609.9. Roof overhangs shall be designed for wind louds in accordance with Section 1609.10. Radio and television towers shall be designed for wind loads in accordance with Section 3108.4. see elso 3109 3.2

1609.1.1 Design provision limitations: The design provisions in Section 1609.0 are limited to buildings or other structures which are sited such that wind channeling effects or buffeting in the wake of upwind obstructions do not merit alternative design procedures. The design provisions in this section shall not be utilized for the design of dome buildings or structures. Buildings and other structures which are outside of the scope of the design provisions of this section shall be designed for wind loads by an approved alternative design procedure or the wind tunnel test procedure in ASCE 7 listed in Chapter 35.

1609.1.2 Wind loads during erection and construction phases: Adequate temporary bracing shall be provided to resist wind loading on structural components and structural assemblages during the erection and construction phases.

1609.1.3 Overturning and sliding: The overturning moment due to wind load shall not exceed two-thirds of the dead-load stabilizing moment unless the building or structure is anchored to resist the excess moment. Where the total resisting force due to friction is insufficient to prevent sliding, anchorage shall be provided to resist the excess sliding force.

1609.1.4 Uplift resistance: Roof deck and framing shall be anchored to supporting construction and the supporting construction, including the foundation, shall be unchored where required to resist the wind uplift load. A maximum of two-thirds of the dead load shall be considered in determining the resistance to the uplift load. Uplift in excess of the total reduced dead loads shall be resisted by foundation anchorage.

1609.2 Definitions: The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

Components and cladding: Elements that are directly loaded by the wind or transfer wind loads to the main windforceresisting system.

Main windforce-resisting system: An assemblage of major structural elements designed to provide support for components and cladding and provide lateral stability for the building.

THE BOCA NATIONAL BUILDING CODE/1996

1607.5 Rain loads: Rain loads utilized in the combination of loads specified in Section 1613.0 shall be calculated in accordance with Section 8 of ASCE 7 listed in Chapter 35. For roofs with a slope less than one-fourth unit vertical in 12 units horizontal (1/4:12), the design calculations shall include verification of the prevention of ponding instability in accordance with Section 8.4 of ASCE 7 listed in Chapter 35. Roofs with provisions for controlled drainage shall be designed in accordance with Section 8.5 of ASCE 7 listed in Chapter 35.

1607.6 Special purpose roofs: Where occupied for incidental promenade purposes, roofs shall be designed for a minimum live load of 60 psf (2873 Pa) and 100 psf (4788 Pa) where designed for roof gardens or assembly or educational occupancies.

1607.6.1 Landscaped roofs: Where roofs are to be landscaped, the uniform design live load in the landscaped area shall be 20 psf (958 Pa). The weight of the landscaping materials shall be considered as dead load and shall be computed on the basis of saturation of the soil.

1607.6.2 Fabric awnings and canopies: Where awnings and canopies are covered with a fabric material, such awnings and canopies shall be designed for a uniform live load of 5 psf (1168 Pa) as well as for snow loads and wind loads as specified in Sections 1608.0 and 1609.0.

1607.6.3 Special purpose roofs: Roofs to be utilized for other special purposes shall be designed for appropriate *loads*, or as otherwise approved.

SECTION 1608.0 SNOW LOADS

1608.1 General: Design snow loads shall be determined in accordance with this section, or shall comply with Section 7 of ASCE 7 listed in Chapter 35, but the design roof load shall not be less than that determined by Section 1607.0.

1608.2 Definitions: The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

Greenhouse

Continuously heated greenhouse: A production or retail greenhouse with a constantly maintained interior temperature of 50 degrees F. (10 degrees C.) or more during winter months. Such greenhouse shall also have a maintenance attendant on duty at all times or an adequate temperature alarm system to provide warning in the event of a heating system failure. Additionally, the greenhouse roof material shall have a thermal resistance (R) less than 2.0.

Production greenhouse: A greenhouse occupied for growing large numbers of flowers and plants on a production basis or for research, without public access.

Retail greenhouse: Agreenhouse occupied for growing large numbers of flowers and plants and having general public access for the purposes of viewing and purchasing the various products. Included in this category are greenhouses occupied for educational purposes.

1608.3 Ground snow loads: Ground snow loads to be utilized in determining the design snow loads for roofs are given in Figures 1608.3(1), 1608.3(2) and 1608.3(3) for the contiguous United States. In some areas the amount of local variation in

snow loads is so extreme as to preclude meaningful mapping. Such areas are not zoned in these figures but are shown in black. In other areas, the snow load zones are meaningful, but the mapped values are not intended to be utilized for certain geographic settings, such as high country, within these zones. Such areas are shaded in as a warning that the zoned value for those areas applies only to normal settings. Ground snow loads for shaded areas in high country and those areas shown in black shall be determined by the local jurisdiction requirements.

1608.4 Flat-roof and low-slope snow loads: The snow load on unobstructed flat roofs and roofs having a slope of 30 degrees (0.2 rad) or less (P_i) shall be calculated in pounds per square foot using the following formula:

$$P_f = C_c l P_g$$

where:

Snow exposure factor determined from Table 1608.4.

Snow load importance factor determined from Table 1609.5.

P_e = Ground snow load expressed in pounds per square foot, determined from Figures 1608.3(1), 1608.3(2) or 1608.3(3).

Exception: The flat-roof snow load on continuously heated greenhouses shall be calculated utilizing the following formula:

$$P_f = C_{lg}C_elP_g$$

where the thermal factor for greenhouses $(C_n) = 0.83$.

Table 1808.4 SNOW EXPOSURE FACTOR (C_s)

Roofs located in generally open terrain extending one-half mile or more from the structure	0.6
Structures located in densely forested or sheltered areas	0.9
Ail other structures	0.7

1608.5 Sloped roof snow loads: Snow loads acting on a sloping surface shall be considered to act on the horizontal projection of that surface. The sloped roof snow load (P) on roofs having a slope greater than 30 degrees (0.52 rad) shall be calculated using the following formula:

$$P_s = C_s P_f$$

where:

P_f = Flat-roof snow load expressed in pounds per square foot.

The roof slope factor (C_s) is determined by the following formula:

$$C_2 = 1 - \frac{(a-30)}{40}$$

where a is the slope of the roof expressed in degrees.

Exception: The roof slope factor (C_s) for continuously heated greenhouses is determined by the following formula:

$$C_s = 1 - \frac{(a-15)}{55}$$

President Larry L. Schultz Councilman, Rockledge

First Vice President
Jim Naugle
Mayor, Fort Lauderdale

Second Vice President
Samuel J. Ferreri
Mayor, Greenacres

April 16, 1996



Florida League of Cities, Inc. 201 West Park Avenue Post Office Box 1757 Tallahassee, FL 32302-1757 Telephone (904) 222-9684 Suncom 278-5331 FAX (904) 222-3806

Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C.

In the Matter of		IB Docket No. 95-59
	Ś	DA 91-577
Preemption of Local Zoning Regulation	Ś	45-DSS-MISC-93
of Satellite Earth Stations	j	
)	

PETITION FOR RECONSIDERATION

On behalf of the 396 municipal governments of Florida, the Florida League of Cities respectfully petitions the Commission to reconsider that portion of its rule adopted by order herein (FCC 96-78), released March 11, 1996, as would put in doubt the validity and enforceability of municipal building codes requiring that exterior antennae be safely constructed and maintained.

In Florida, we are very conscious of the extensive damage inflicted on structures and objects, such as antennae mounted on roofs and walls of buildings and antennae installed on the ground in populated areas, as evidenced in storms like Hurricanes Andrew (1992), Erin and Opal (both 1995).

Municipal building codes in Florida have been revised to meet this demonstrated danger to the public's safety. It serves no business for these 396 cities to come to Washington to defend their building codes. For the Commission to impose additional burdens on the cities' enforcement of their codes in this era of municipal fiscal stringency is plainly contrary to the public interest in the safety of persons and property.

Al-Larger William Evers, Mayor, Bradenton - Mary Johnson, Commissioner, Crange County - Alexander Peneles, Commissioner, Metro-Dade County - Eric Smith, Councilman, Jacksonville - Gereld Thompson, Commissioner, Broward County - District Directors: A. O. Campbell, Mayor Pro Tem, DeFunisk Springs - Brende Hendricks, Mayor, Parker - Gignet Sowden, Councilman, Lake City - Jeak Hayman, Sr., Mayor, Edgewær - Devid Rigeby, Mayor, DeLand - William Copeland, Mayor, Archer - Paula DeLaney, Mayor, Gainesville - John Land, Mayor, Apopta - John Pollet, Mayor, Kipsimmee - Bevid Rigeby, Mayor, DeLand - William Copeland, Mayor, Archer - Paula DeLaney, Mayor, Gainesville - John Land, Mayor, Apopta - John Pollet, Mayor, Riseimmee - Bevid Rigeby, Mayor, Peneles, Mayor, Mayor, Mayor, Peneles, Mayor, Mayor, Mayor, Commissioner, Peneles, Mayor, Ma

FCC Petition for Reconsideration Page Two

The ill-conceived presumption against the codes' enforceability should be reversed.

Respectfully Submitted,

Michael Sittig
Executive Director

ZONING

\$ 21.609

- (b) A bay window which is not more than ten feet wide may extend three feet into a required front or rear yard.
- (c) Unenclosed porches, terraces, balconies and decks may extend five feet into a required front yard, five feet into a required side yard, and 12 feet into a required rear yard. "Unenclosed" shall mean no side enclosure, other than railings, that is more than 18 inches in height, exclusive of screens.
- (d) The ordinary projections of chimneys and flues may extend into a required yard.
- (e) Mechanical or HVAC equipment may be located in a required side or rear yard, but on corner lots shall not project beyond the required side yard on the street side of the corner lot.
- (f) The front, side and rear yard requirements of this chapter shall not apply to any necessary retaining wall or required screening fence.

 (Ord. No. 862, 10-10-91)

Sec. 21-608. Street frontage for lots.

Every building that is erected shall be located on a lot having its principal frontage on a public street; on a private street which existed prior to January 1, 1966, and which has been recorded in the clerk's office of the circuit court of the city and the County of James City; or on a private street which is shown on a subdivision plat or a planned development plan which has been duly approved by the city and which has been recorded in the aforesaid clerk's office.

(Ord. No. 862, 10-10-91)

Sec. 21-609. Satellite dishes and antennae.

- (a) Satellite dishes.
- (1) In residential zoning districts, satellite dishes shall be allowed as follows:
 - a. Satellite dishes with a diameter of 18 inches or less shall be permitted by right, and shall be limited to being located in side or rear yard areas, or attached to the side or rear wall of a building, or to the roof of a building facing the side or rear yard. No such satellite dish shall be located in a front yard area or attached to the front wall or roof of a building facing the front yard, or located in a side yard on the street side of a corner lot or attached to the side wall or roof of a building facing the street side of a corner lot. In no event shall the satellite dish be visible from the Colonial Williamsburg historic area CW.
 - b. Satellite dishes with a diameter of more than 18 inches shall be permitted as a special exception requiring approval of the board of zoning appeals in accordance with section 21-97(f). In its consideration of such applications, the board may impose such conditions as it deems necessary to protect the

Supp. No. 6 1705

§ 21-609

WILLIAMSBURG CODE

public health, safety and general welfare and to protect the character of adjacent properties and those immediately across the street, and particularly the character of the Colonial Williamsburg historic area CW. In no event shall a satellite dish be visible from the Colonial Williamsburg historic area CW. No satellite dish shall exceed ten feet in diameter. A satellite dish shall be located at ground level and only in a rear yard. The bottom of a satellite dish shall be no higher than two feet above the adjacent natural grade, and the top of a satellite dish shall be no higher than 12 feet above the adjacent natural grade. The satellite dish shall be set back at least three feet from any side property line and five feet from any rear property line, and on corner lots shall not project beyond the required side yard on the street side of the corner lot. All satellite dishes shall be of a subdued color to blend with the landscape. Satellite dishes shall be screened from view from adjacent properties by new or existing plant material, obscuring fence or buildings on all sides except the side oriented to the line of reception. The color of the satellite dish and the type of screening shall be approved by the board of zoning appeals.

- c. Satellite dishes located in the Architectural Preservation AP and Corridor Protection CP Districts shall be approved by the architectural review board, in accordance with article IX, if they are visible from a public street.
- (2) In any nonresidential zoning district, satellite dishes shall be allowed as follows:
 - a. Satellite dishes with a diameter of 18 inches or less shall be permitted by right, and shall be limited to being located in side or rear yard areas, or attached to the side or rear wall of a building, or to the roof of a building facing the side or rear yard, or located on top of a flat-roofed building. No such satellite dish shall be located in a front yard area or attached to the front wall or roof of a building facing the front yard, or located in a side yard on the street side of a corner lot or attached to the side wall or roof of a building facing the street side of a corner lot. In no event shall the satellite dish be visible from the Colonial Williamsburg historic area CW.
 - b. Satellite dishes with a diameter of more than 18 inches shall be located only at ground level in a rear yard or on top of a flat-roofed building, and shall not exceed 12 feet in diameter.
 - 1. If located a ground level, the satellite dish shall meet all requirements, other than size, listed in section 21-609(a)(l), and must be approved as a special exception by the board of zoning appeals, in accordance with section 21-97(f).
 - 2. If located on top of a flat-roofed building, the satellite dish shall be set back from the edge of the roof a distance equal to at least two times the height of the satellite dish. The top of the satellite dish shall be no

Supp. No. 6

ZONING

§ 21.610

higher that 12 feet above the roof. The satellite dish shall be screened on all sides except the side oriented to the line of reception by an element of the building or by a separate, permanently installed screen harmonizing with the building in material, color, size and shape. Screening shall be approved by the architectural review board when required by Article IX, Architectural Review.

- c. Satellite dishes located in the Architectural Preservation AP and Corridor Protection CP Districts shall be approved by the architectural review board in accordance with article IX, if they are visible from a public street.
- (3) If a useable satellite signal cannot be obtained by locating or sizing a dish antenna in accordance with the above-listed criteria, an application for a special exception may be made to the board of zoning appeals. The board of zoning appeals may authorize an exception to the placement and/or size limitations in order to provide for the reception of a useable signal. In its consideration of such applications, the board may impose such conditions as it deems necessary to protect the public health, safety and general welfare and to protect the character of adjacent properties and those immediately across the street, and particularly the character of the Colonial Williamsburg historic area CW. In no event shall a satellite dish be visible from the Colonial Williamsburg historic area CW.
- (4) No lettering or advertising messages shall be painted on or attached to any satellite dish greater than 18 inches in diameter.
- (b) Antennae.
- (1) Radio and television antennae for home use, when attached to the main building, shall be exempt from height requirements of this chapter.
- (2) Towers supporting radio and television antennae shall not exceed the height allowed for accessory buildings in the zoning district in which they are located. The board of zoning appeals may approve, as a special exception in accordance with section 21-97(f), an increase in the height of the tower up to the maximum height allowed for main structures in the zoning district in which it is located. In no event shall the tower be visible from the Colonial Williamsburg historic area CW.

(Ord. No. 862, 10-10-91; Ord. No. 3-95, 3-9-95)

Sec. 21-610. Screening requirements.

- (a) Mechanical equipment.
- (1) Ground- and roof-mounted equipment shall be screened from view from a public street or other public place, from adjacent lots in a residential district, and from an adjacent lot containing a residential use, by one or more of the following:
 - a. An element of the building;



TO:

Mayor and City Council

DATE:

January 6, 1995

SUBJECT: Ordinance #3-95: 18 inch Satellite Dishes

Competition in the telecommunications sector (cable, telephone, satellite communications, etc.) is one key to future service improvements at a fair price. The city needs to look at its regulations with eye toward removing impediments to the functioning of the telecommunications marketplace.

A letter received from James W. Bateman, Sr., a member of the City's Cable Advisory Committee, (attached) suggesting that the City rethink how its restrictions on small satellite dishes, fits into this pro-competition approach.

The Zoning Ordinance now requires that any satellite dish in residential districts be approved by the Board of Zoning Appeals. The attached ordinance would modify this restriction and allow 18 inch dishes or less by right in side and rear yards, or attached to the side or rear of the building, provided that they are not visible from the street. In non-residential districts, 18 inch dishes would also be allowed by right in side and rear yards and on flat roofs, provided that they are not visible from the street. Allowing these small dishes by right would make the option of receiving direct broadcast satellite television in lieu of cable more viable.

Staff contact: Reed Nester

Recommendation: That City Council refer the attached ordinance to the Planning Commission for review and recommendation. Since the attached ordinance is an amendment to the Zoning Ordinance, public hearings will be required by Planning Commission and City Council.

Jackson C. Tuttle City Manager



TO:

Mayor and City Council

DATE:

February 27, 1995

SUBJECT: PCR #01-95

Amendment of the Zoning Ordinance by the revision of Sec. 21-609(a), Satellite Dishes and Antennae, to allow satellite dishes with a diameter of

18 inches or less by right.

City Council, at its January 12th meeting, referred to Planning Commission for review and recommendation a proposal to amend the City's Zoning Ordinance by revising the satellite dish regulations [Sec. 21-609(a)] to allow dishes with a diameter of 18" or less by right. The present regulations require Board of Zoning Appeals approval in residential districts, with a maximum size of ten feet.

The Commission has modified the suggested ordinance as forwarded by City Council: language has been added to subsections (a)(1)a. and (a)(2)a, allowing satellite dishes to be located on the roof of a building facing a side or rear yard; and provisions have been added as subsections (a)(1)c. and (a)(2)c, noting that satellite dishes located in the Architectural Preservation (AP) and Corridor Protection (CP) districts, and visible from a public street, must be approved by the Architectural Review Board. If a satellite dish in the AP or CP district is not visible from a public street, ARB approval is not required. If a satellite dish is not located in the AP or CP district, and the dish is located in accordance with subsections (a)(1)a. and (a)(2)a., it can be visible from a public street.

PLANNING COMMISSION RECOMMENDATION

The Planning Commission held a public hearing on these changes on February 15th, and no one spoke at the public hearing either for or against the changes. The Commission unanimously recommended to City Council that the Zoning Ordinance be amended to allow satellite dishes of 18" diameter or less by right, in accordance with the attached ordinance.

> Reed T. Nester Planning Director

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